CLAIMS

1. An inspection system for an optical device comprising:

a high intensity lamp configured with a curved reflector;

a condenser lens situated to receive light from the high intensity lamp and the curved reflector and produce a collimated beam of light;

an object retaining device configured to allow the collimated beam to be incident upon objects to be inspected;

an objective lens operatively situated to receive light that passes through objects in the object retaining device;

a narrow aperture within an opaque surface that is placed to receive light that passes through the objective lens; and

a display device operatively connected to display light emerging through the narrow aperture.

2. The inspection system of claim 1 wherein the high intensity lamp is a metal halide lamp.

3. The inspection system of claim 1 wherein the curved reflector is an elliptical reflector.

4. The inspection system of claim 1 wherein the light from the high intensity lamp and the curved reflector converges at a secondary focal point between the condenser lens and the high intensity lamp.

5. The inspection system of claim 4 wherein the secondary focal point is located at a distance from the condenser lens essentially equal to the condenser lens' focal length.

6. The inspection system of claim 1 further comprising a correction condenser lens between the condenser lens and the object retaining device, the correction condenser lens being selected to compensate for refraction caused by the object retaining device.

7. The inspection system of claim 6 wherein the correction condenser lens is formed as part of the object retaining device.

8. The inspection system of claim 6 wherein the correction condenser lens is formed as part of the condenser lens.

9. The inspection system of claim 1 wherein the condenser lens has a numerical aperture that is essentially 0.9.

10. The inspection system of claim 1 wherein the object retaining device has at least one curved surface that light will pass through during inspection.

11. A method for inspecting optical devices comprising the steps of:

providing a high intensity lamp configured with a curved reflector that is situated with respect to a condenser lens such that light emerging from the high intensity lamp and the curved reflector is incident upon the condenser lens producing a collimated beam of light;

directing the collimated beam of light at an object retaining device containing optical devices to be inspected;

placing an objective lens to receive light that passes through objects in the object retaining device;

forming a narrow aperture to receive light that passes through the objective lens; and

displaying light emerging through the narrow aperture.

12. The method for inspecting devices as in claim 11 wherein the step of providing further comprise the high intensity lamp being a metal halide lamp.

13. The method for inspecting devices as in claim 11 wherein the step of providing further comprises the curved reflector being an elliptical reflector.

14. The method for inspecting devices as in claim 11 wherein the step of providing further comprises the light from the high intensity lamp and the curved reflector converging at a secondary focal point between the condenser lens and the high intensity lamp.

15. The method for inspecting devices as in claim 14 wherein the step of providing further comprises locating the secondary focal point at a distance from the condenser lens essentially equal to the condenser lens' focal length.

16. The method for inspecting devices as in claim 11 wherein the step of providing further comprises providing a correction condenser lens between the condenser lens and the object retaining device, the correction condenser lens being selected to compensate for refraction caused by the object retaining device.

17. The method for inspecting devices as in claim 16 wherein the step of providing further comprises the correction condenser lens being formed as part of the object retaining device.

18. The method for inspecting devices as in claim 16 wherein the step of providing further comprises providing the correction condenser lens being formed as part of the condenser lens.

19. The method for inspecting devices as in claim 11 wherein the step of providing further comprises providing the condenser lens with a numerical aperture that is essentially 0.9.

20. The method for inspecting devices as in claim 11 and further comprising at least one curved surface within the object retaining device.